WORKING DRAFT FOR DISCUSSION
MARCH 15, 2006

Clean Water Act Uses Framework
DRAFT – DO NOT CITE

Problem Statement: How should data be treated in the permitting, monitoring and enforcement of water quality-based limits which are below the analytical detection or quantitation limits?

Straw Proposal to PWG: FACDQ should make recommendations to EPA on how to handle such data for purposes of

1. Establishing permit limits

2. Establishing compliance/enforcement limits

3. Data Reporting
    a. Reasonable Potential
    b. Compliance/Enforcement

Other possible additions for PWG to consider:

1. Should the FACDQ make any additional recommendations regarding reasonable potential such as how to use the data in the reasonable potential calculation? Some options for the form and/or extent of those recommendations might include:
    a. Should these recommendations be in the form of guidance to EPA?
    b. Should the FACDQ identify specific topics or issues where additional guidance should be prepared as part of the implementation of the FACDQ recommendations (e.g., when would additional monitoring or studies be required)?
    c. Should the FACDQ assign a subgroup to work with EPA to write guidance for the States and other constituents?
    d. Should the FACDQ undertake the drafting of any additional guidance deemed necessary for the implementation of the FACDQ recommendations (e.g., though a work assignment to the TWG)?
2. Should the FACDQ make any additional data reporting recommendations to EPA such how to treat data for purposes of impairment determinations? One suggestion is to treat impairment and reasonable potential data similarly.

Beginnings of a Possible Uses Consensus:

1. Permit Limit -- options:
    a. WQBEL
    b. L_Q

2. Data Reporting

a. For purposes of compliance/enforcement reporting such as reporting to the PCS system, report actual numerical value if greater than or equal to L_Q. Otherwise, report (possible options)
    1. 0 (zero) and specify value of L_Q.
    2. Less than value of L_Q.
    3. ND (not detected) or DBQL (detected below quantitation level), as the case may be, and specify the value of L_C or L_Q and L_C.

b. For reporting purposes other than compliance/enforcement, report actual numerical value if greater than or equal to L_Q. Otherwise, report (possible options):
    1. Same as for compliance/enforcement
    2. Results down to an L_Q defined by different (presumable less restrictive than MQOs defined for compliance/enforcement) MQOs.
    3. Numerical values down to the L_C and specify the L_C and L_Q. If not detected, report:
        1. 0 (zero) or ND and specify value of L_C, or
        2. < value of L_D (or < value of 2 L_C)

3. Decisions Based on Data – Compliance/enforcement
    a. For decisions on a daily maximum limit (reporting conventions 1.i and ii.)
        1. If result is > L_Q, then compare result to permit limit to determine compliance.
        2. If result is < L_Q, then compliance is demonstrated regardless of where the permit limits falls in relation to L_Q
    b. For decisions on a daily maximum limit (reporting convention 1.iii.)
        1. If result is > L_Q, then compare result to permit limit to determine compliance
        2. If result is < L_C, then compliance is demonstrated
        3. If result > L_C but < L_Q, options:
            1. Compliance is demonstrated
            2. Compliance is demonstrated unless WQBEL is < ½ L_C (States proposal from December 2005 meeting)
    c. For decisions on an average limit (reporting conventions 1.i and ii.)
        1. Use any result > L_Q as is
        2. Assign 0 (zero) to any result < L_Q
        3. Average zero and non-zero results, options
            1. Compare average to compliance limit (L_Q)
            2. Compare average to WQBEL

EXAMPLE: WQBEL = 1 (monthly average)
Permit monitoring frequency is once weekly
L_Q = 10

$L_C = 2$
Suppose weekly values are: DBQL, 16, ND, 20

Determine compliance:
$(0 + 16 + 0 + 20) \div 4 = 9$

Decision if compared to the "compliance limit" ➔ Compliance
Decision if compared to WQBEL ➔ Not compliance

d. For decision on an average limit (reporting convention 1.iii.)
    1. Use any result > L_Q as is
    2. Assign 0 (zero) to any result < L_C
    3. If result >L_C but < L_Q, options:
        1. Assign 0 (zero) to result
        2. If WQBEL is < ½ L_C, options:
            a. Assign value of L_C to result
            b. Assign value of L_C to result only if 2 or more values in the data set exceed L_C, otherwise assign 0
            c. Others
    4. Average zero and non-zero results, options
        1. Compare average to compliance limit (L_Q)
        2. Compare average to WQBEL

4. Decisions Based on Data – Reasonable Potential
    a. Need for numerical limits in permits
        1. Decisions based on pollutant test data are more case-dependent and procedures very greatly by state
        2. Consideration of other factors
            1. Biological indicators (for example fish or other aquatic organisms)
            2. Whole effluent toxicity (WET) testing
            3. Sediment quality
            4. Ambient water quality
            5. Industrial processes or raw materials of particular facility in question
        3. Lacking other considerations, decisions should be based on multiple analyses
            1. Sometimes decisions are made using initial screening based on as little as a single data point
                a. If no-detect, there may be a concern for false negative rates
                b. If a pollutant is detected, particularly below quantitation, additional monitoring is sometimes

undertaken to allow taking advantage of statistics

b. Options other than numerical limits when there is a "hit" or "detect" (below LQ) when doing permit application testing. FAC may want to suggest guidance that allows flexibility for the regulatory agency to explore alternatives to immediately imposing an effluent limitation based on the single hit. For example:
    1. Suggest that the permittee perform additional monitoring prior to permit issuance for the purpose of expanding the data set.
    2. Require additional monitoring in the permit to expand data set. If it becomes necessary, agency could modify permit.
    3. Not imposing the limit but putting a special study requirement in the permit, where data is reported on the Discharge Monitoring Report (DMR) the same as for compliance/enforcement but once per year (for example) the permittee submits a special report to the agency with information on any hits below LQ. This study might also include pollution minimization work where potential sources are identified and reduced, etc.

5. Decisions Based on Data – Waters Listing
    a. Without going into detail, it seems as if decisions for this use are similar to those for reasonable potential for numerical limits.